

5
PCT09
10.11.01
ENTERED

RAW SEQUENCE LISTING DATE: 02/27/2001
PATENT APPLICATION: US/09/762,926 TIME: 14:54:35

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\02272001\I762926.raw

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PATENT APPLICATION: US/09/762,926

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58	aaaccagagc	gcgcaaacac	ttggcaat	tttgcataata	cctataaaaa	aggattgtta	1920
59	aaacaagatg	atacattagg	attaaaactg	gtcggttacc	gcagccgcac	cgacaactac	1980
60	atccacaacq	tttacggaa	atggggat	ttgaacggca	atattccgag	ctgggtcagc	2040
61	agcacccggc	tgcctacac	catccaacac	cycaattca	aagacaaagt	acacaaacac	2100
62	ggtttgagt	tggagctaa	ttacgattt	gggcgtttt	tacccaacct	ttcttacgcc	2160
63	tatcaaaaaa	gcacgcaacc	gaccaacttc	agcgatgcga	gogaatcgcc	caacaatgcg	2220
64	tccaaagaag	accaactcaa	acaaggttat	gggttgagca	gggttccgc	cctgccgcga	2280
65	gattacggac	gtttggaaqt	cgttacgcgc	tggggggca	acaaactgac	tttgggcggc	2340
66	gcgatgcgt	atttcgcac	gacatccgc	gcaacggctg	aagaacycta	tatcgacggc	2400
67	accaacgggg	gaaataccag	caatgtccgg	caactggca	agcgttccat	caaacaacc	2460
68	gaaaccctt	cccggccac	tttgatttt	gatitttacg	ccgccttaega	gccgaagaaa	2520
69	aactttattt	tcgcgcgcga	agtcaaaaat	ctgttcgaca	ggcgatatat	cgatccgcgc	2580
70	gatgcgggca	atgatgcgc	aacgcagcgt	tattacagtt	cgttcgacc	gaaagacaag	2640
71	gacgaagaag	taacgtgtaa	tgctgataaa	acgttgtgca	acggcaata	cggcggcaca	2700
72	aycaaagcg	tattgaccaa	ttttgcacgc	ggacgcac	ttttgataac	gatgagctac	2760
73	aagttaa						2769
75	<210>	SEQ ID NO:	2				
76	<211>	LENGTH:	922				
77	<212>	TYPE:	PRT				
78	<213>	ORGANISM:	Bacteria				
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82	1	5	10	15			
83	Val Met Leu Tyr His His Ser Tyr Ala Glu Asp Ala Gly Arg Ala Gly						
84	20	25	30				
85	Ser Glu Ala Gln Ile Gln Val Leu Glu Asp Val His Val Lys Ala Lys						
86	35	40	45				
87	Arg Val Pro Lys Asp Lys Val Phe Thr Asp Ala Arg Ala Val Ser						
88	50	55	60				
89	Thr Arg Gln Asp Ile Phe Lys Ser Ser Glu Asn Leu Asp Asn Ile Val						
90	65	70	75	80			
91	Arg Ser Ile Pro Gly Ala Phe Thr Gln Gln Asp Lys Ser Ser Gly Ile						
92	85	90	95				
93	Val Ser Leu Asn Ile Arg Gly Asp Ser Gly Phe Gly Arg Val Asn Thr						
94	100	105	110				
95	Met Val Asp Gly Ile Thr Gln Thr Phe Tyr Ser Thr Ser Thr Asp Ala						
96	115	120	125				
97	Gly Arg Ala Gly Gly Ser Ser Gln Phe Gly Ala Ser Val Asp Ser Asn						
98	130	135	140				
99	Phe Ile Ala Gly Leu Asp Val Val Lys Gly Ser Phe Ser Gly Ser Ala						
100	145	150	155	160			
101	Gly Ile Asn Ser Leu Ala Gly Ser Ala Asn Leu Arg Thr Leu Gly Val						
102	165	170	175				
103	Asp Asp Val Val Gln Gly Asn Asn Thr Tyr Gly Leu Leu Leu Lys Gly						
104	180	185	190				
105	Leu Thr Gly Thr Asn Ser Thr Lys Gly Asn Ala Met Ala Ala Ile Gly						
106	195	200	205				
107	Ala Arg Lys Trp Leu Glu Ser Gly Ala Ser Val Gly Val Leu Tyr Gly						
108	210	215	220				

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109 His Ser Arg Arg Thr Trp Ala Gln Asn Tyr Arg Val Gly Gly Gly
 110 225 230 235 240
 111 Gln His Ile Gly Asn Phe Gly Ala Glu Tyr Leu Glu Arg Arg Lys Gln
 112 245 250 255
 113 Arg Tyr Phe Val Gln Glu Gly Gly Leu Lys Phe Asn Ser Asn Ser Gly
 114 260 265 270
 115 Lys Trp Glu Arg Asp Phe Gln Arg Pro Tyr Trp Lys Thr Lys Trp Tyr
 116 275 280 285
 117 Gln Lys Tyr Asn Asp Pro Gln Glu Leu Gln Lys Tyr Ile Glu Gly His
 118 290 295 300
 119 Asp Lys Ser Trp Arg Glu Asn Leu Ala Pro Gln Tyr Asp Ile Thr Pro
 120 305 310 315 320
 121 Ile Asp Pro Ser Ser Leu Lys Gln Gln Ser Ala Gly Asn Leu Phe Lys
 122 325 330 335
 123 Leu Glu Tyr Asp Gly Val Phe Asn Lys Tyr Thr Ala Gln Phe Arg Asp
 124 340 345 350
 125 Leu Asn Thr Lys Ile Gly Ser Arg Lys Ile Ile Asn Arg Asn Tyr Gln
 126 355 360 365
 127 Phe Asn Tyr Gly Leu Ser Leu Asn Ser Tyr Ala Asn Leu Asn Leu Thr
 128 370 375 380
 129 Ala Ala Tyr Asn Ser Gly Arg Gln Lys Tyr Pro Lys Gly Ser Lys Phe
 130 385 390 395 400
 131 Thr Gly Trp Gly Leu Leu Lys Asp Phe Glu Thr Tyr Asn Asn Ala Lys
 132 405 410 415
 133 Ile Leu Asp Leu Asn Asn Thr Ala Thr Phe Arg Leu Pro Arg Glu Thr
 134 420 425 430
 135 Glu Leu Gln Thr Thr Leu Gly Phe Asn Tyr Phe His Asn Glu Tyr Gly
 136 435 440 445
 137 Lys Asn Arg Phe Pro Glu Glu Leu Gly Leu Phe Phe Asp Gly Pro Asp
 138 450 455 460
 139 Gln Asp Asn Gly Leu Tyr Ser Tyr Leu Gly Arg Phe Lys Gly Asp Lys
 140 465 470 475 480
 141 Gly Leu Leu Pro Gln Lys Ser Thr Ile Val Gln Pro Ala Gly Ser Gln
 142 485 490 495
 143 Tyr Phe Asn Thr Phe Tyr Phe Asp Ala Ala Leu Lys Lys Asp Ile Tyr
 144 500 505 510
 145 Arg Leu Asn Tyr Ser Thr Asn Thr Val Gly Tyr Arg Phe Gly Glu
 146 515 520 525
 147 Tyr Thr Gly Tyr Tyr Gly Ser Asp Asp Glu Phe Lys Arg Ala Phe Gly
 148 530 535 540
 149 Glu Asn Ser Pro Thr Tyr Lys Lys His Cys Asn Gln Ser Cys Gly Ile
 150 545 550 555 560
 151 Tyr Glu Pro Val Leu Lys Lys Tyr Gly Lys Lys Arg Ala Asn Asn His
 152 565 570 575
 153 Ser Val Ser Ile Ser Ala Asp Phe Gly Asp Tyr Phe Met Pro Phe Ala
 154 580 585 590
 155 Ser Tyr Ser Arg Thr His Arg Met Pro Asn Ile Gln Glu Met Tyr Phe
 156 595 600 605
 157 Ser Gln Ile Gly Asp Ser Gly Val His Thr Ala Leu Lys Pro Glu Arg

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158	610	615	620
159	Ala Asn Thr Trp Gln Phe Gly Phe Asn Thr Tyr Lys Lys Gly Leu Leu		
160	625	630	635
161	Lys Gln Asp Asp Thr Leu Gly Leu Lys Leu Val Gly Tyr Arg Ser Arg		640
162	645	650	655
163	Ile Asp Asn Tyr Ile His Asn Val Tyr Gly Lys Trp Trp Asp Leu Asn		
164	660	665	670
165	Gly Asn Ile Pro Ser Trp Val Ser Ser Thr Gly Leu Ala Tyr Thr Ile		
166	675	680	685
167	Gln His Arg Asn Phe Lys Asp Lys Val His Lys His Gly Phe Glu Leu		
168	690	695	700
169	Glu Leu Asn Tyr Asp Tyr Gly Arg Phe Phe Thr Asn Leu Ser Tyr Ala		
170	705	710	715
171	Tyr Gln Lys Ser Thr Gln Pro Thr Asn Phe Ser Asp Ala Ser Glu Ser		720
172	725	730	735
173	Pro Asn Asn Ala Ser Lys Glu Asp Gln Leu Lys Gln Gly Tyr Gly Leu		
174	740	745	750
175	Ser Arg Val Ser Ala Leu Pro Arg Asp Tyr Gly Arg Leu Glu Val Gly		
176	755	760	765
177	Thr Arg Trp Leu Gly Asn Lys Leu Thr Leu Gly Gly Ala Met Arg Tyr		
178	770	775	780
179	Phe Gly Lys Ser Ile Arg Ala Thr Ala Glu Glu Arg Tyr Ile Asp Gly		
180	785	790	795
181	Thr Asn Gly Gly Asn Thr Ser Asn Val Arg Gln Leu Gly Lys Arg Ser		800
182	805	810	815
183	Ile Lys Gln Thr Glu Thr Leu Ala Arg Gln Pro Leu Ile Phe Asp Phe		
184	820	825	830
185	Tyr Ala Ala Tyr Glu Pro Lys Lys Asn Leu Ile Phe Arg Ala Glu Val		
186	835	840	845
187	Lys Asn Leu Phe Asp Arg Arg Tyr Ile Asp Pro Leu Asp Ala Gly Asn		
188	850	855	860
189	Asp Ala Ala Thr Gln Arg Tyr Tyr Ser Ser Phe Asp Pro Lys Asp Lys		
190	865	870	875
191	Asp Glu Glu Val Thr Cys Asn Ala Asp Lys Thr Leu Cys Asn Gly Lys		880
192	885	890	895
193	Tyr Gly Gly Thr Ser Lys Ser Val Leu Thr Asn Phe Ala Arg Gly Arg		
194	900	905	910
195	Thr Phe Leu Ile Thr Met Ser Tyr Lys Phe		
196	915	920	
198	<210> SEQ ID NO: 3		
199	<211> LENGTH: 2769		
200	<212> TYPE: DNA		
201	<213> ORGANISM: Bacteria		
203	<400> SEQUENCE: 3		
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205	catcatagtt atgcgaaga tgcaggcgcc gcgggcageg aggcgcagat acaggtttg	120	
206	gaagatgtgc acgtcaaggc gaaggcgcgtta ccgaaagaca aaaaagtgtt taccgatgcg	180	
207	cgtgccatat cgaccggcgtca ggtatatttc aaatcccgcg aaaaacctcgaa caacatcgta	240	
208	cgcagcatcc cggcgtt tacacagcaa gataaaagct cggcgttgt gtctttgaat	300	

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209	atccgcggcg	acaqcggtt	cggcgggtc	aatacgatgg	tggacggcat	cacgcagacc	360										
210	ttttatttgcg	cttcacccga	tgcgggcagg	gcaggcggtt	catttcattt	cggcgatct	420										
211	gtcgacacga	attttatgc	cggtactggat	gtcgtaaaag	gcagcttcag	cggctcgcca	480										
212	ggcatcaaaa	gccttgcgg	tgcggcata	ctgcggactt	taggcgttgg	tgacytcgtt	540										
213	caggcaata	atacctacgg	cctgtctgt	aaagggtctga	cggcaccata	ticaaccaa	600										
214	ggtaatgcga	ttggcggcgat	agggtgcgc	aatggctgg	aaagcggagc	atctgtcggt	660										
215	gtgttttacg	ggcacacgcg	gcccgcgtg	gcgcggaaatt	ccccgcgtgg	cggcggcggy	720										
216	cagcacatcg	gaaatttgg	cgccggat	cttgcggcgc	gcaaggcgg	atattttgt	780										
217	caagaaggcg	ggttggaaat	caatccca	acggggaaat	ggggcggg	tttccaaagg	840										
218	ccgtactgg	aaaccaagt	gtatcaaaa	tacatgacc	cacaagaact	gcaaaaatac	900										
219	atcgaaggc	atgacaaaa	ctggcgggaa	aacctggcgc	cgcaatacga	catcacc	960										
220	atcgatccgt	ccaycctgaa	gcacgcgtcg	gcacggcaatc	tgtttaaatt	ggaataacgac	1020										
221	ggcgatattc	ataaaatcac	ggccgaattt	cgcgatattt	acaccaaaat	cggcagccgc	1080										
222	aaaatcatca	acgcgaatta	tcaattcaat	tacggtttat	ctttaaactc	atatgccaac	1140										
223	ctcaatctga	ccgcaccc	caattcggc	aggcggaaat	atccgaaagg	gtcgaaattt	1200										
224	acaggctgg	ggcttttaaa	agatttgaa	acttacaaca	acgcgaaaat	cctcgaccc	1260										
225	aacaacaccc	ccaccc	gctggccgc	gaaacccgt	tgcaccc	tttgggcttc	1320										
226	aattatttcc	acaacgata	cgccaaaaac	cgcgttccgt	agaatgggg	gtgtttttc	1380										
227	gacggtcgg	atcaggacaa	cggggtttat	tcttattttg	gggggtttaa	ggcgataaa	1440										
228	gggtcgctgc	ccccaaaaatc	aaccatcg	caatccggcc	gcagccaa	tttcaacacg	1500										
229	ttctacttcg	atgcgcgt	aaaaaaagac	atttacgc	taaactacag	caccaatacc	1560										
230	gtcggctacc	gtttcgggg	cgaatatacg	ggcttacg	gtcgatga	cgaatttaa	1620										
231	cggcattcg	gagaaaaactc	gccgacata	aagaacatt	gcaaccagag	ctgcggaa	1680										
232	atgaaacccg	tattggaaa	atacggcaa	aagcgccca	acaaccatc	gtcgacatt	1740										
233	atgtcggt	tcggcgat	tttcatggc	tgcggcgt	atcgcgac	acaccgtat	1800										
234	cccaacatcc	aagaatgt	ttttccaa	atcgccact	ccggcqitca	cacccctta	1860										
235	aaaccagacg	gcgcaaacac	ttggcaattt	ggcttcaata	cctataaaa	aggatttgtt	1920										
236	aaacaagatg	atatacatt	tttttttt	atggggat	tttgcggat	cgacaactac	1980										
237	atccacaac	tttacgggaa	atggggat	tttgcggat	atattccgag	ctgggtcagc	2040										
238	agcaccggc	ttgcctacac	catccaaac	cgcattttt	aagacaaatg	acacaaacac	2100										
239	ggtttttgat	ttggatgt	tttgcgtt	tttgcgtt	tttgcgtt	tttgcgtt	2160										
240	tatcaaaaa	gcacgcacc	gaccaacttc	agcgatgcg	gcgaaatgcg	caacaatgcg	2220										
241	tccaaagaag	accaactca	acaagggtt	gggttgat	gggtttccgc	cctgcgcga	2280										
242	gattacggac	gtttggaaat	cggtacgc	ttgttgggg	acaaactgac	tttggcggc	2340										
243	cgatgcgt	atttcggca	gagcatccgc	gcgcggctg	aagaaacgt	tatcgacggc	2400										
244	accaacgggg	gaaatacc	caatgtccgg	caactgggg	gcgcgttccat	caacaaacc	2460										
245	aaacccttgc	ccgcacggcc	tttgcgtt	tttgcgtt	tttgcgtt	tttgcgtt	2520										
246	aacccat	ttccgcgc	atgtcgat	tttgcgtt	tttgcgtt	tttgcgtt	2580										
247	gtatgcggca	atgtcgat	aacgcgcgt	tattacgtt	cgatgcaccc	aaagacaag	2640										
248	gacgaagaag	taacgtt	ttgtgtat	tttgcgtt	tttgcgtt	tttgcgtt	2700										
249	agcaaaa	tttgaccc	ttttgcaccc	ggacgcaccc	ttttgcatac	gtatgcgtac	2760										
250	aagtttttaa						2769										
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253	<211>	LENGTH:	922														
254	<212>	TYPE:	PRT														
255	<213>	ORGANISM:	Bacteria														
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259	1				5					10					15		

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/762,926

DATE: 02/27/2001

TIME: 14:54:36

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\02272001\1762926.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date